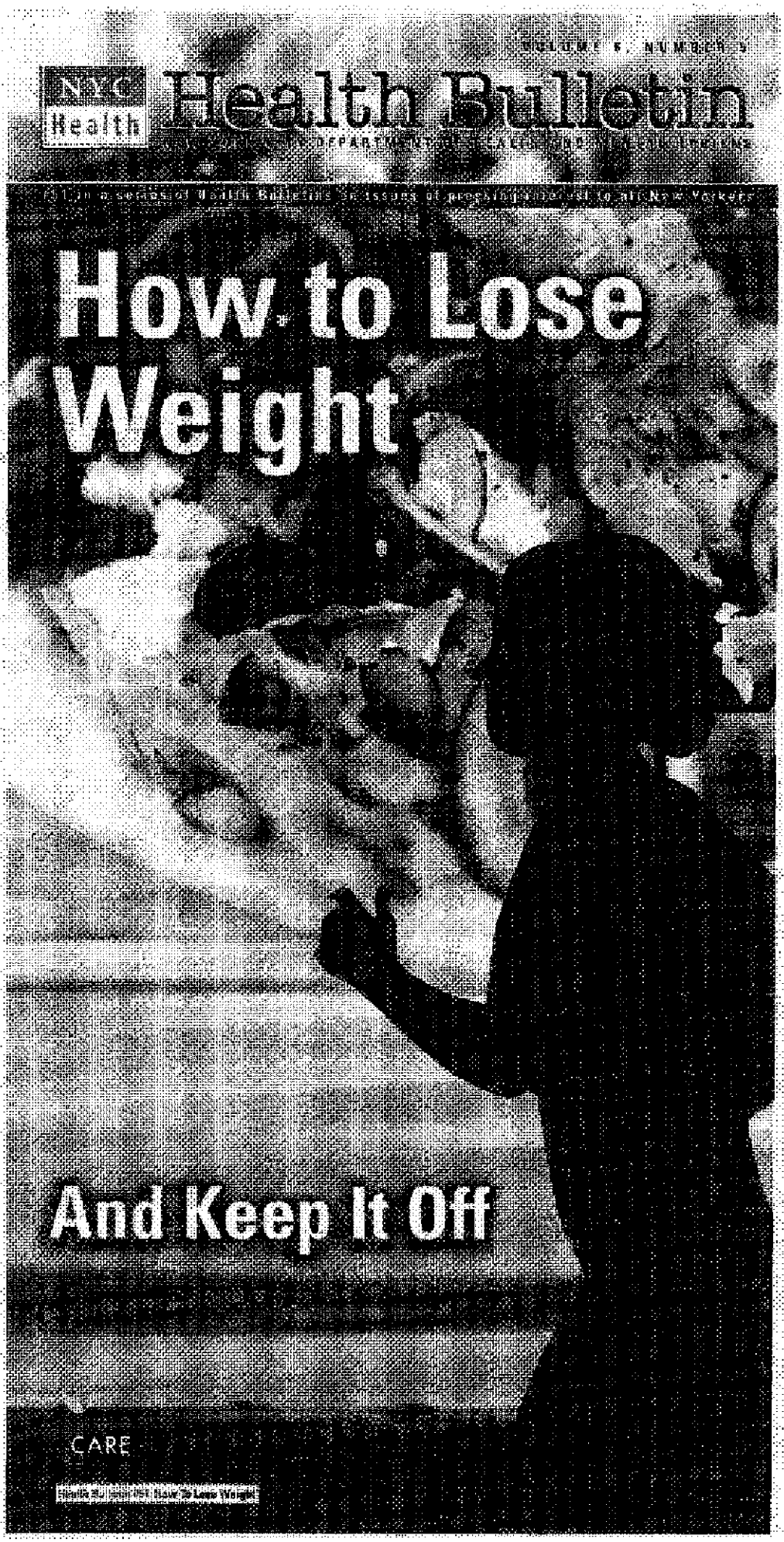
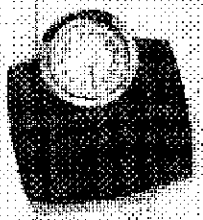
EXHIBIT 9


NYC Health
Health Bulletin
How to Lose Weight
And Keep It Off
CARE

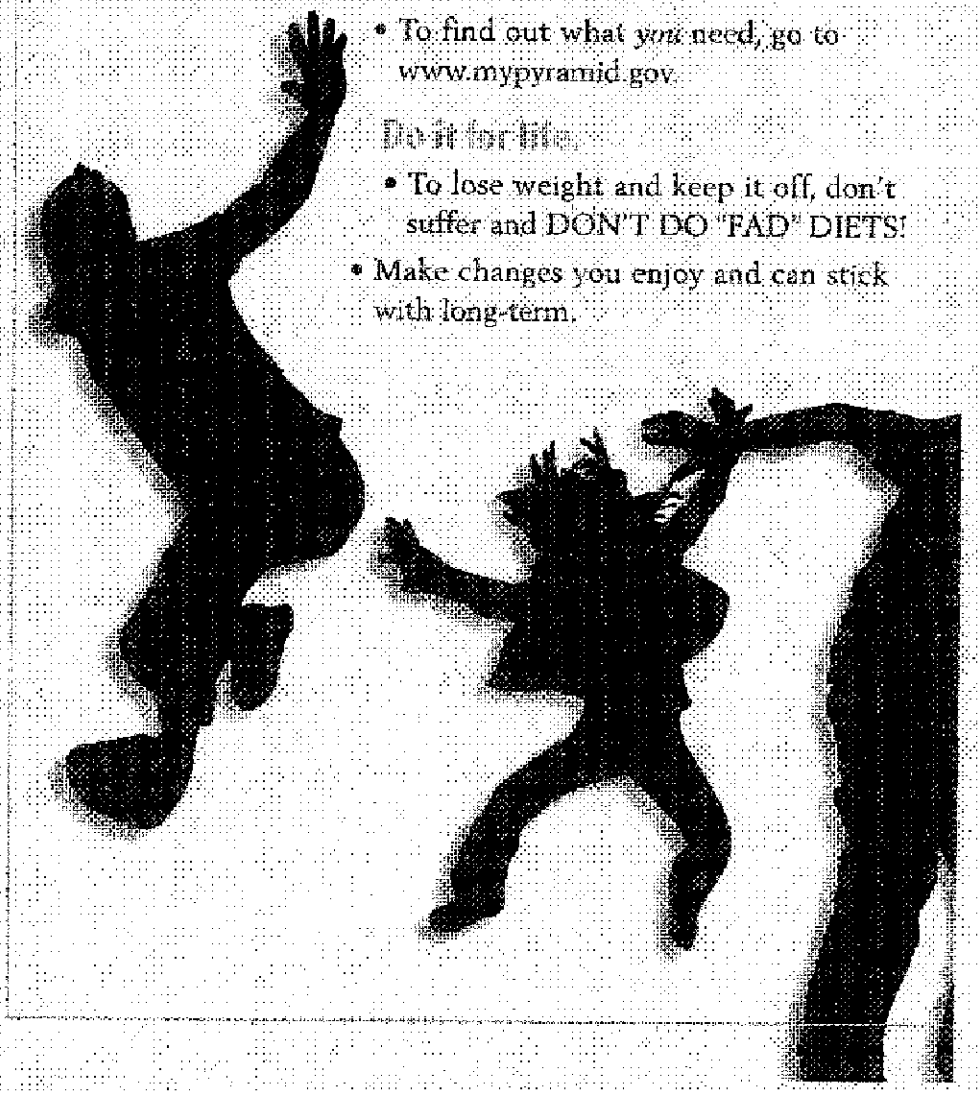


How to Lose Weight

Being overweight or obese raises your risk of many serious health problems, including diabetes, heart disease, stroke, high blood pressure, arthritis, and even cancer. But losing even a *few* pounds can reduce these risks!

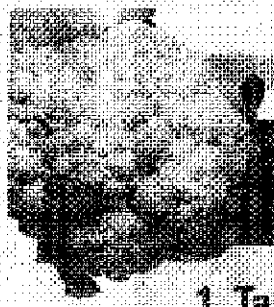
Use more calories than you eat.

- One pound = 3,500 calories.
  - If you eat 3,500 calories more than you burn, you gain a pound.
  - If you burn 3,500 calories more than you eat, you lose a pound.
- The exact number of calories a person needs depends on age, sex, and activity level.
  - Most men ages 41 to 60 need about 2,200 calories a day.
  - Most women the same age need fewer – between 1,600 and 1,800 a day.
  - To find out what *you* need, go to www.mypyramid.gov.



Do it for life.

- To lose weight and keep it off, don't suffer and DON'T DO "FAD" DIETS!
- Make changes you enjoy and can stick with long-term.



10 Weight-Loss Tips

1. Take your time.

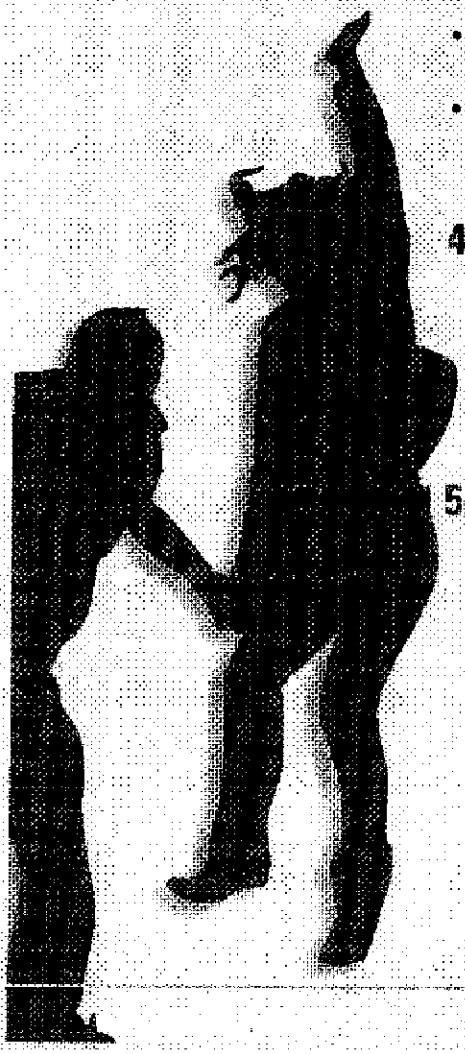
- Aim to lose only 1 or 2 pounds a week. People who lose weight faster are more likely to gain it back.
- Don't be tempted by "fad" diets and drugs. They don't work for long, and some are dangerous.

2. Pay attention to what you eat and drink.

- Keep a daily food diary for a while. Most people eat out of habit and are unaware of how much they consume.
- Don't eat in front of the TV. Get a real plate and sit down at the table.
- Eat slowly. It takes about 20 minutes to start feeling full. People who eat too fast often eat too much.

3. Watch your empty-beverage calories.

- One regular can of soda, or one sugary drink has about 150 EMPTY calories (no nutritional value).
- One less sugar-sweetened drink a day = a 15-lb. weight loss in a year.
- Drink water, unsweetened tea, or low-fat milk instead of regular soda and other sugar-sweetened drinks.



4. Prepare more meals at home.

- It's easier to know and control what you eat when you prepare your own food.
- Home-cooked meals are usually healthier and less expensive than eating out.
- Read Nutrition Facts labels when you shop.

5. Choose carefully when eating out.

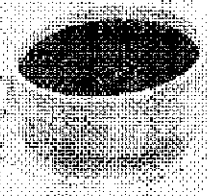
- To lose weight, eat out less.
- Some entrees and large fast-food meals have more than 1,500 calories -- almost enough for a whole day!
- When you *do* eat out, watch out for large portions. Split an order, or take half of it home.
- Choose healthier items, such as salads (but watch the dressing!)

That Really Work

6. Eat more fruits and vegetables.

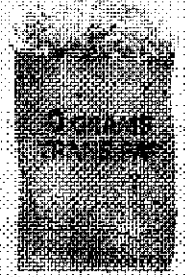
- Aim for 5 to 9 servings a day.
- They help keep you healthy – and fill you up on very few calories.

7. Feel FULL on fewer calories.



- Make smarter choices. You could have 8 to 10 servings of fruits and vegetables for every ONE fast-food taco salad (800 calories).
- Choose high-fiber foods that fill you up: fruits, vegetables, beans, lentils, and whole-grain cereals, breads, and pasta.
- Have a broth-based soup or green salad at the start of a meal.
- Drink plenty of water – at least 8 glasses a day.

8. Choose healthier snacks.



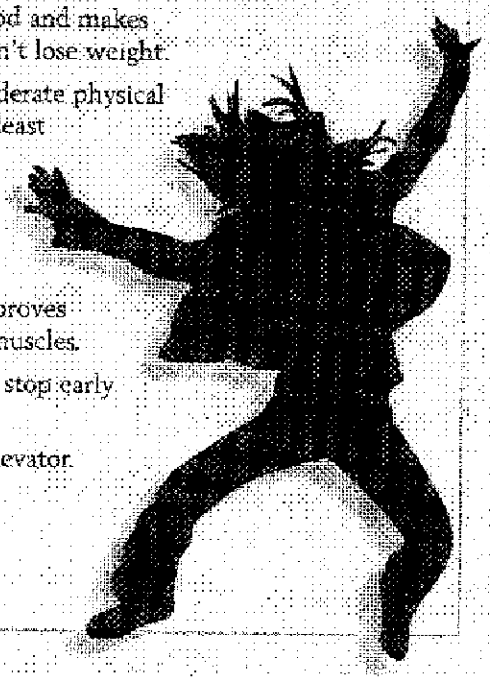
- Snack on fruits and vegetables instead of candy, cookies, and chips.
- Try pretzels, low-fat popcorn, or low-fat frozen yogurt.

9. Don't skip breakfast.

- People who eat breakfast lose weight easier.
- Skipping meals makes you hungrier and more likely to overeat.

10. Get moving!

- Physical activity improves mood and makes you healthier – even if you don't lose weight.
- Get at least 30 minutes of moderate physical activity, such as brisk walk, at least 5 days a week.
- You don't have to join a gym or buy a lot of expensive equipment.
- Just *walking* burns calories, improves heart health, and strengthens muscles.
- Get off the bus or subway one stop early and walk the rest of the way.
- Take the stairs instead of the elevator.



Small Changes That Can Help You Lose Weight

If you usually...			
Use the elevator or escalator	Climb stairs for 2 minutes	Every day	2
Use a tablespoon of mayonnaise on your sandwich	Use mustard	3 times a week	4
Eat a *large* order of fast food fries	Substitute a *small* order of fast food fries	Once a week	5
Watch a lot of TV	Do a little housework	1/2 hour a day	5
Drink an 8-oz. glass of *whole* milk	Drink an 8-oz. glass of *non-fat* milk	Once a day	6
Have 2 drinks sitting at the bar for an hour	Order 1 drink and *dance* for an hour	Once a week	6
Drive or take a taxi, bus or subway	Walk briskly for 20 minutes	Every day	7
Snack on a 2-oz. chocolate bar	Have a piece of fruit	Twice a week	7
Drink a 16-oz. latte with *whole* milk	Drink a 16-oz. latte with *non-fat* milk	Every day	10
Eat a 3-egg cheese omelet with bacon, toast and hash browns	Have a bowl of cereal with *non-fat* milk for breakfast	Once a week	11
Eat a pint of ice cream every week	Substitute a half-pint of sorbet	Every week	12
Drink a can of regular soda	Have a glass of water	Once a day	15

- [illegible] nyc.gov/heart or call 311 and ask for "Healthy Heart"
- [illegible] nyc.gov/parks or call 311 and ask for "Fitness."
- Weight Loss: www.fda.gov/loseweight
- Physical activity: www.cdc.gov/nccdphp/dnpa/physical/index.htm
- Healthy diet: www.mypyramid.gov

DIAL 311

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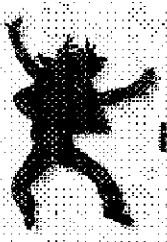


How to Lose Weight

DIAL 311

City Health Information

Preventing and Managing Overweight and Obesity in Adults

- **Assess weight status periodically by weighing patients and calculating their body mass index (BMI).**
- **Develop a realistic weight-loss plan with your patients; focus on a reduced-calorie diet, regular physical activity, and behavioral support.**
- **Promote healthy lifestyle choices for life-long weight management.**

Overweight and obesity are epidemic in New York City (NYC) and across the country. About two thirds of the US population are overweight or obese,[1] including more than half (about 3 million) of the adults in NYC. More than 100,000 deaths a year nationwide are directly attributed to obesity,[2] and increased body weight is associated with higher all-cause mortality.[3] The key modifiable behavioral factors in obesity—unhealthy diet and physical inactivity—are second only to smoking as causes of premature death in the US.[4]

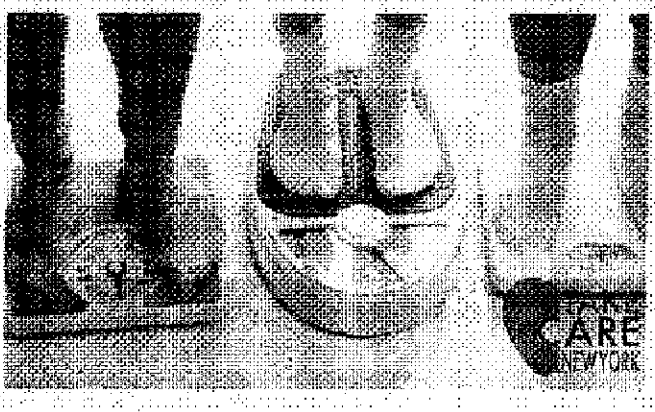
Being overweight or obese increases the risk of type 2 diabetes, heart disease, stroke, gall bladder disease, osteoarthritis, sleep apnea, respiratory problems, and colon, breast, endometrial, and prostate cancers.[3] Other health consequences include compromised psychological well-being along with social stigmatization and discrimination.[3]

Obesity-Related Disparities in New York City[5]

- In NYC, women are more likely than men to be obese (23% vs. 20%).
- The poorest New Yorkers are more obese than the wealthiest (29% vs. 16%).
- Black and Hispanic New Yorkers of all income levels are more likely to be obese than white New Yorkers. Even among residents with household incomes ≥$50,000, nearly twice as many blacks and Hispanics are obese than whites (23% vs. 12%).
- Poorer New Yorkers are less likely to exercise, regardless of race/ethnicity.

The dramatic doubling in obesity rates among US adults—from 15% to 32% between 1971 and 2004—cannot be explained by changes in genetic factors. Rather, changes in nutrition, physical activity, and environmental factors are key contributors to this epidemic. Weight gain-inducing behaviors include sedentary lifestyle, consuming a diet high in calories, relying on food prepared and eaten outside the home, and excessive intake of high-calorie beverages. Environmental factors that influence these behaviors include poverty, heavy marketing of unhealthy foods and large portion sizes, and the construction of neighborhoods that discourage physical activity.[3]

Weight gain occurs incrementally over time; between 1990 and 2000, US adults gained an average of 1 pound per year.[3] Given this insidious process, it is critical that clinicians carefully monitor weight in their patients and help them modify weight gain-inducing behaviors.



5 Steps to Preventing and Managing Overweight and Obesity in Primary Care

1. Assess weight status with body mass index (BMI).
2. Assess risk factors and comorbidities.
3. Recommend weight loss for overweight and obese patients.
4. Assess barriers to weight loss.
5. Formulate a weight loss plan that focuses on healthy eating and physical activity.

1. ASSESS WEIGHT STATUS IN ALL ADULTS

Screen all adult patients for overweight and obesity by weighing them and calculating their BMI using the following formula:

$$\frac{\text{Weight (kg)}}{\text{Height (m)}^2} \quad \text{OR} \quad \frac{\text{Weight (lbs)} \times 703}{\text{Height (inches)}^2}$$

An online BMI calculator can be found at: www.nhlbisupport.com/bmi.

Table 1 displays BMI categories; Figure 1 will help you to quickly assess weight status. Use clinical judgment interpreting the BMI; it may be skewed by edema, high muscularity, muscle wasting, or short stature.

In addition to BMI, a large waist circumference is an independent risk factor among patients with a BMI under 35 kg/m². A waist circumference of >40 inches in men and >35 inches in women increases the risk of type 2 diabetes, dyslipidemia, hypertension, and cardiovascular disease because of excess abdominal fat.[7]

2. ASSESS RISK FACTORS AND COMORBIDITIES

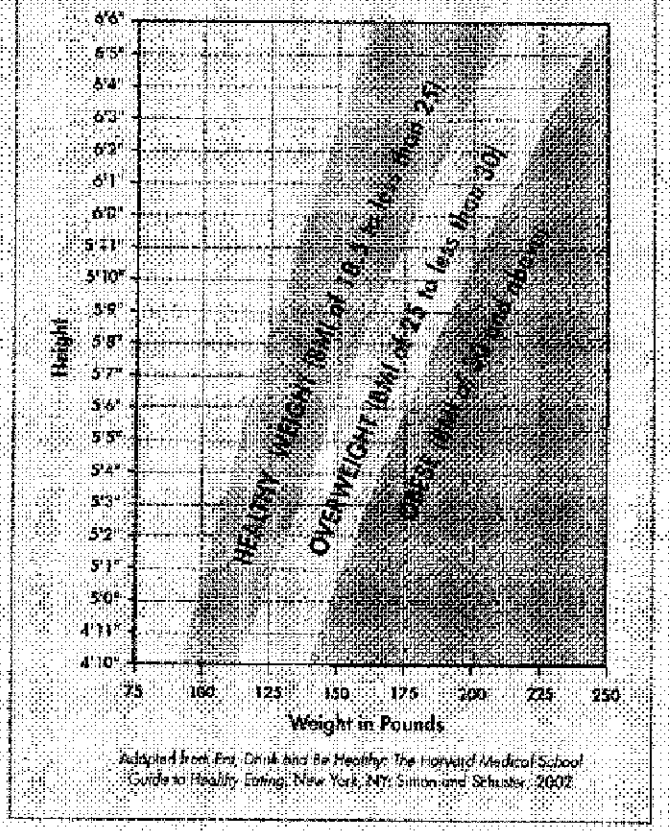
The need for weight loss is particularly critical when other risk factors and/or comorbidities are present. A comprehensive history and physical exam are essential to assess risk factors and comorbidities.

Table 1. Classification for BMI*

Classification	BMI Range
Underweight	<18.5 kg/m²
Normal Weight	18.5–24.9 kg/m²
Overweight	25–29.9 kg/m²
Obesity (Class 1)	30–34.9 kg/m²
Obesity (Class 2)	35–39.9 kg/m²
Clinically Severe Obesity (Class 3)	≥40 kg/m²

*Some Asian populations may be at increased risk for type 2 diabetes and cardiovascular disease at BMIs <25 kg/m². The cutoff point for increased risk ranges from 22 kg/m² to 25 kg/m² in different Asian populations.[8]

Figure 1. BMI at a Glance



Adapted from Eat, Drink and Be Healthy: The Harvard Medical School Guide to Healthy Eating. New York, NY: Simon and Schuster. 2002.

Identify patients at very high risk for complications, including death. These patients may have:

- Established coronary heart disease, including a history of myocardial infarction, angina, coronary artery surgery, or coronary artery procedures (e.g., angioplasty);
- Presence of other atherosclerotic disease, including peripheral arterial disease, abdominal aortic aneurysm, or symptomatic carotid artery disease;
- Type 2 diabetes;
- Sleep apnea.

Identify other risk factors that increase risk for cardiovascular disease, including:

- Cigarette smoking;
- Physical inactivity;
- Age—men ≥45 years and women ≥55 years (or postmenopausal);
- Fasting glucose between 110 and 125 mg/dL, or impaired glucose tolerance (OGTT between 140 and 199 mg/dL);
- Hypertension (or blood pressure controlled with medication);
- Low-density lipoprotein (LDL) ≥160 mg/dL;
- High-density lipoprotein (HDL) <35 mg/dL;
- Triglycerides ≥200 mg/dL.

Lifestyle counseling is important for all patients.

Physical activity and healthy eating decrease risks for chronic disease, regardless of weight or weight loss. Counsel all patients to eat a healthy diet and to get at least 30 minutes of moderate-intensity physical activity at least 5 days a week, preferably every day.[10,11] Moderate-intensity activities, such as brisk walking, bicycling, vacuuming, and gardening cause small increases in breathing or heart rate.[11] Suggest the following weight management tips:

- Avoid high-calorie beverages, including juice.
- Eat less fast food.
- Eat more fruits and vegetables.
- Limit portion sizes.
- Incorporate physical activity into daily life.

Other conditions associated with obesity include gynecological abnormalities (e.g., menorrhagia, amenorrhea, polycystic ovarian syndrome), gallstones, osteoarthritis, gout, stress incontinence, and decreased quality of sexual life.[8]

Rule out potential causal factors, such as medical conditions (e.g., hypothyroidism, depression) and current medications, that may induce weight gain. Medications that cause weight gain are particularly common in the treatment of diabetes, mood disorders (e.g., depression, bipolar disorder), and psychotic disorders (e.g., schizophrenia) (see Table 5, page 28, for a list of weight gain-inducing medications and alternatives).

3. RECOMMEND WEIGHT LOSS IN OVERWEIGHT AND OBESE PATIENTS

Inform overweight or obese patients of their weight status and recommend weight loss. Provide the patient with information on their risk for chronic disease based on an individual risk assessment (Step 2, page 24) and on the benefits of weight loss. Discuss weight status with sensitivity and attention to potential stigma (Table 2).

Weight loss has many potential benefits. Tell your patients that weight loss can[7,9]:

- Lower elevated blood pressure;
- Lower elevated levels of total cholesterol, bad cholesterol (LDL), and triglycerides, and raise low levels of good cholesterol (HDL) in those with dyslipidemia;
- Lower elevated blood glucose levels in patients with type 2 diabetes, and prevent or delay the onset of type 2 diabetes in those who do not yet have the disease. In patients with pre-diabetes, a 5% weight loss (about 10–15 lbs) and at least 30 minutes of physical activity 5 days a week reduced the risk of developing diabetes by nearly 60%.[9]

In addition to improving a patient's medical profile, weight loss can make a person feel more confident and comfortable in social situations.

4. ASSESS BARRIERS TO WEIGHT LOSS

Weight loss is challenging for most patients. Many will face such obstacles as[7]:

- Lack of motivation;
- Time constraints;
- Lack of understanding of risks and benefits;
- Lack of support from family and friends;
- Financial constraints;
- Lack of a feasible plan for making lifestyle changes;
- Lack of access to places for exercise;
- Lack of access to markets that sell healthy foods;
- Family eating patterns;
- Negative attitudes toward physical activity;
- Stigma and weight bias (resulting in inaction).

Understanding these issues and helping patients address potential obstacles will increase the likelihood of success. Even if patients are not ready to lose weight, encourage them to set manageable goals to improve their diet and/or raise their level of physical activity. Healthy behaviors prevent chronic diseases and can help stabilize weight over time.

5. FORMULATE A WEIGHT-LOSS PLAN

The initial goal of weight loss therapy is a 10% reduction in body weight over 6 months. Weight loss should be gradual—1 to 2 pounds, or 1% of body weight, per week. If additional weight needs to be lost after the initial 6-month period, set new targets.[7]

A combination of a reduced-calorie diet, regular moderate- to vigorous-intensity physical activity, and support for lifestyle changes is the cornerstone of weight loss and maintenance and the safest strategy for both. Other approaches to weight management include drug regimen changes (if obesity is drug-induced), pharmacotherapy, and weight-loss surgery.

Table 2. Weight Issues Are Sensitive[12]

- Weigh patients in a private setting and record weight without judgment or comment.
- Ensure that medical equipment (e.g., gowns, blood pressure cuffs, scales, speculums) is appropriately sized to accommodate obese patients.
- Be sensitive when initiating discussion on weight (e.g., *"Being overweight puts you at risk for a number of health problems. Mrs. Smith, could we talk about your weight today?"*).
- Avoid hurtful or offensive descriptors (e.g., *"fatness," "weight problem"*).
- Use interactive, empathic communication to enhance self-confidence and behavior change (e.g., *"How are you feeling about your weight at this time? What are your goals now? What are some practical steps you can take to help meet these goals?"*).

Table 3. Treatment Options[7,16]

Treatment	BMI				
	25–26.9 kg/m²	27–29.9 kg/m²	30–34.9 kg/m²	35–39.9 kg/m²	≥40 kg/m²
Diet, physical activity, and support for lifestyle change	Yes	Yes	Yes	Yes	Yes
CONSIDER TREATMENTS BELOW ONLY AFTER FAILURE OF WEIGHT LOSS WITH ADEQUATE LIFESTYLE CHANGES AND IN CONJUNCTION WITH ONGOING LIFESTYLE CHANGES.					
Drug therapy*	No	See below*	See below*	See below*	See below*
Weight loss surgery†	No	No	No	Guidelines vary†	Consider, with comorbidities†

* Consider drug therapy only when patient is at increased medical risk due to weight (e.g., serious comorbidities, such as diabetes or sleep apnea).

† Recommended criteria for considering bariatric surgery vary, ranging from BMI ≥35 with comorbidities to BMI ≥40 to BMI ≥40 with comorbidities.[16]

Table 3 outlines weight-loss treatment options with consideration given to initial BMI and the presence of serious comorbidities due to weight.

Physical activity

Regular physical activity plays an important role in weight loss and maintenance. Regular exercise also increases cardiorespiratory fitness and may decrease abdominal fat. Even patients who are unable to meet weight targets can significantly decrease their risk of chronic diseases with consistent moderate- to vigorous-intensity physical activity.

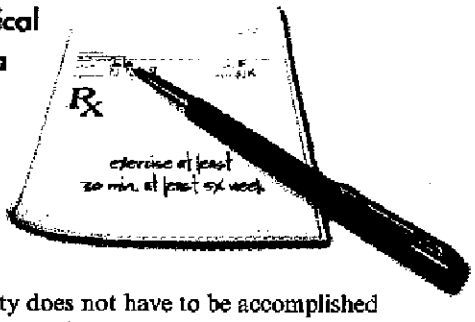
Assess patients' current physical activity levels by asking about frequency, duration, and types of physical activity (including walking for transportation). Prescribe a physical activity plan on a prescription pad to convey the importance of physical activity in a weight loss and maintenance plan.[9,17,18]

Evaluate patients with high-risk conditions (e.g., diabetes, cardiovascular disease, stroke, uncontrolled hypertension) to determine an appropriate exercise program. The decision to order exercise testing should be based on a patient's age, symptoms, and concomitant risk factors.[7] Indications for exercise testing include:

- Known cardiovascular disease, including cardiac disease, peripheral vascular disease, and cerebrovascular disease;
- Known heart murmur;
- Known pulmonary disease, including chronic obstructive pulmonary disease, asthma, interstitial lung disease, and cystic fibrosis;
- Known metabolic disease, including type 1 or type 2 diabetes, thyroid disorders, and renal or liver disease;
- One or more signs or symptoms suggestive of cardiovascular and pulmonary disease, including pain (or any other anginal equivalent) in the chest, neck, jaw, or arms that may be due to ischemia; shortness of breath at rest or with mild exertion; syncope; orthopnea or paroxysmal nocturnal dyspnea; ankle edema; palpitations or tachycardia; intermittent claudication; and unusual fatigue or shortness of breath with usual activities.[10]

At least 30 minutes of moderate-intensity physical activity is recommended a minimum of 5 days a week, preferably every day. For many patients, this level of activity may not be enough to produce significant weight loss and prevent weight regain. For these patients, recommend at least 40 to 60 minutes of moderate- to vigorous-intensity activity 5 or more days a week.[9,11,19] Work with each patient to find a physical activity level that achieves weight control.

Prescribe a physical activity plan on a prescription pad to convey the importance of physical activity.



Daily physical activity does not have to be accomplished all at once. Accumulating activity in 10-minute segments results in health benefits.[9,11] Advise patients to build as much physical activity as possible into their daily routines. Two extra minutes of stair climbing each day can burn the equivalent of 1.6 pounds a year, enough to mitigate the average yearly weight gain in American adults.[5] **Table 4** describes simple steps patients can take to increase their daily physical activity. For most patients, walking is the most feasible form of physical activity.

Social support (e.g., buddy activities, walking groups) helps people increase physical activity.[20] Provide resources such as fitness resource directories that include information about free and low-cost physical activity programs (**Resources**).

Dietary change

Adherence to a reduced-calorie diet is essential to weight loss. A reduction of 500 to 1,000 calories per day will result in a loss of 1–2 pounds per week. For women, this often means a diet containing 1,000 to 1,200 calories/day; for men, this means 1,200 to 1,600 calories/day.[7]

Assess the patient's current diet to identify opportunities for caloric reduction. It may be helpful to have patients keep a food diary for a few days so that you can identify areas where they can cut back. Common sources of extra calories include:

- High-calorie beverages (non-diet soda, sugar- and fat-laden coffee drinks, fruit drinks and juices, "energy" drinks, alcoholic beverages);
- High-fat and/or high-calorie foods (e.g., "fast food," deep-fried foods, chips, cookies, candy, bagels);
- Large portion sizes (e.g., restaurant meals).

Table 4 describes steps patients can take to reduce daily caloric intake. Addressing simple issues such as beverage choice can be an important first step. If appropriate, refer patients to a dietitian for more in-depth dietary counseling and support.

Table 4. Lifestyle Modifications: Diet and Physical Activity[7,9,11,19,20]

Physical Activity	**To lose weight and to prevent weight regain, work up to at least 40 to 60 minutes of moderate- to vigorous-intensity activity 5 or more days a week.* Daily physical activity can be broken down into 10-minute segments. Every minute of activity burns calories.** **Avoid injury and build endurance by starting slowly and increasing physical activity over time. Include as much brisk walking as you can in your daily routine.** • Get off the bus or subway a stop or two early and walk the rest of the way. • Take the stairs instead of the elevator or escalator. • Walk for 10 to 20 minutes after every meal. • Walk in available indoor spaces (e.g., hallways, stairs). **Look for ways to get more physical activity.** • View household chores (vacuuming, raking leaves, running errands) as opportunities to get more physical activity. • Limit time spent in front of the TV and computer. • Use TV-viewing time as an opportunity to pedal a stationary bike or walk on a treadmill. • Put on music and dance. • Partner up with a buddy for activities, or join a walking group. **Regardless of weight, everyone should get at least 30 minutes of moderate-intensity physical activity at least 5 days a week, preferably every day.**
Diet	**To lose weight, cut 500 – 1,000 calories/day.** **Eat a healthy diet. Look for ways to reduce excess calories.** • Drink water, seltzer, 1% or skim milk, or other low- or no-calorie beverages. Limit or avoid non-diet soda, fruit drinks and juices, high-calorie coffee beverages, alcohol, and 2% or whole milk. • Limit high-calorie foods. • Eat less fat; limit fast food, deep-fried foods, and high-fat meats and dairy. Cook with only small amounts of healthy oils (e.g., olive, canola). • Eat foods high in fiber, such as fruits and vegetables, beans and lentils, and whole grains. • Snack on fruits and vegetables instead of high-fat and/or high-calorie foods (e.g., chips, candy, cookies). • Read food and beverage labels to identify products that are low in calories and fat. **Pay attention to how you eat.** • Control portion size by using smaller plates and bowls. • Avoid eating in front of the TV. • Don't skip meals, especially breakfast. • Prepare more meals at home. **Everyone should eat a moderate, healthy diet to prevent weight gain over time and reduce the risk of chronic disease.**

*Moderate-intensity activities cause small increases in breathing or heart rate and include brisk walking, bicycling, vacuuming, and gardening. Vigorous-intensity activities cause large increases in breathing or heart rate (i.e., to the point where it is difficult to hold a conversation). Such activities include running and aerobics.[11]

Support for lifestyle change

Behavioral support is an important adjunct to a comprehensive weight loss and weight loss maintenance plan. There is evidence that intensive counseling about diet and exercise, together with behavioral interventions aimed at skill development, motivation, and support strategies, produces sustained weight loss in adults who are obese.[21]

After assessing a patient's barriers to weight loss (Step 4, page 25), work with the patient to address those barriers. Help the patient set small, achievable behavioral goals. Many patients want more help with weight management than they receive from their primary care physicians.[22] Refer patients who need more support, particularly those at high medical risk, to a behavioral therapist and/or group weight loss program.

Drug regimen considerations

Because some medications can cause weight gain, review all medications a patient is taking and consider weight-neutral or weight loss-promoting alternatives (see **Table 5**). If a weight gain-inducing drug cannot be avoided, emphasize the need for regular physical activity and healthy eating. When the weight gain-inducing drug is an antidepressant or mood stabilizer, physical activity can also help relieve symptoms of depression and anxiety and improve mood.[23]

Be aware that medications, particularly glycemic and blood pressure control drugs, may need to be modified with any caloric restriction, increased physical activity, or weight loss.

Drug therapy

Use drug therapy as an adjunct to behavior change only for patients who are at increased medical risk and who have not met reasonable weight loss goals after 6 months of behavior change strategies. Drug therapy results in a net weight loss of 4 to 22 pounds, with most weight loss occurring within the first 6 months of treatment.[7] See **Table 6** for FDA-approved weight loss drugs. The safety and effectiveness of these medications have not been established for use beyond 2 years.[24]

Weight loss drugs may have serious adverse effects; prescribe them with caution (**Table 6**). Before prescribing, talk to your patient about adverse effects, lack of long-term safety and effectiveness data, and the temporary nature of weight loss achieved by medications.[6] Sibutramine is contraindicated in many patients,[7,24] and some studies have raised safety concerns with both sibutramine[25,26] and orlistat.[27,28] Closely monitor patients on drug therapy. Not every patient will respond to drug therapy. Initial non-responders are unlikely to respond even with an increase in dose.[7]

Diethylpropion, mazindol, benzphetamine, phendimetrazine, and phentermine are still on the market for short-term use. Two appetite-suppressant medications, fenfluramine and dexfenfluramine, were withdrawn from the market in 1997 after being linked to the development of valvular heart disease and primary pulmonary hypertension. The possibility that phentermine may be associated with primary pulmonary hypertension cannot be ruled out.[24]

Table 5. Weight Gain-Inducing Drugs and Alternatives[29]*

Drugs that may induce weight gain	Drugs that are weight-neutral or promote weight loss
Diabetes drugs	
Insulin, glipizide, glyburide, glimepiride, pioglitazone, rosiglitazone, nateglinide, repaglinide	Metformin,† acarbose, miglitol, pramlintide, exenatide, sitagliptin phosphate
Antidepressants	
SSRIs (initial weight loss, then weight gain), monoamineoxidase inhibitors, tricyclic antidepressants, mirtazapine, trazodone	Buproprion, venlafaxine, nefazodone
Mood stabilizers	
Lithium, valproic acid ***Less wt gain:*** quetiapine	Lamotrigine, tiagabine, ziprasidone, aripiprazole
Antipsychotic drugs	
Clozapine, olanzapine, thioridazine/mesoridazine, sertindole, chlorpromazine, risperidone, haloperidol, fluphenazine ***Less wt gain:*** quetiapine	Molindone, ziprasidone
Anticonvulsants	
Valproic acid, gabapentin, carbamazepine, oxcarbamazepine	Topiramate, lamotrigine
Migraine prevention drugs	
Anticonvulsants and antidepressants (as above), beta-blockers	Topiramate, verapamil
Contraceptives and hormone replacement therapy	
Hormonal contraceptives (progestin-containing)	Barrier methods, copper IUD
Hormone replacement therapy (progestin-containing)	No alternative
Anti-inflammatory drugs	
Corticosteroids (oral)	NSAIDs, inhaled corticosteroids
Antihypertensive agents	
Alpha- and beta-blockers	Thiazide diuretics, ACE inhibitors, angiotensin receptor blockers (ARBs)
Antiretroviral therapy	
All agents	No alternatives
Allergy drugs	
Diphenhydramine	Inhaled corticosteroids
Thyroid drugs	
PTU, methimazole	No alternatives

*Off-label uses of drugs are not listed in the table.

†Metformin is the first-line pharmacologic treatment for type 2 diabetes unless contraindicated.

The use of brand names does not imply endorsement of any product by the New York City Department of Health and Mental Hygiene.

Herbal preparations and supplements are not recommended. They are unregulated and have potentially harmful and unpredictable effects. FDA consumer alerts have been issued against some herbs, including products containing ephedra, aristolochic acid, and herbal weight-loss tea.[30]

Bariatric surgery

Bariatric surgery, including vertical-banded gastroplasty and Roux-en-Y gastric bypass, is an option for carefully selected patients who are at increased medical risk, and who have had no sustainable success with diet, exercise, and behavior modification. Recommendations for considering bariatric surgery vary. The National Heart, Lung and Blood Institute (NHLBI) recommends that surgery be considered for those with a BMI ≥35 with comorbidities or a BMI ≥40 regardless of the presence of comorbidities.[7] The American College of Physicians recommends that surgery be considered for those with a BMI ≥40 with comorbidities.[16]

An average weight loss of 20 kg (44 lbs) for surgically treated patients at 8 years of follow-up was observed in one study.[16] Obesity-associated conditions such as type 2 diabetes, dyslipidemia, hypertension, and obstructive sleep apnea are improved or reversed in the majority of patients.[31,32] Bariatric surgery is also associated with a reduction in mortality.[31]

Bariatric surgery has significant risks. A recent report found the 30-day mortality rate to be 1.9%. In another study, nearly 40% of patients required re-admission or emergency department visits during the 6 months following bariatric surgery.[33] Operative complications include anastomotic leak, subphrenic abscess, splenic injury, pulmonary embolism, wound infection, and stoma stenosis.[7] Later complications include incisional hernias, gallstones, and dumping syndrome.[16]

If a patient is a potential candidate for bariatric surgery, discuss surgery-related issues, including long-term side effects and the need to alter one's eating habits after surgery. Refer potential candidates for surgery to a high-volume center with experienced bariatric surgeons, as mortality and complication rates decrease with the volume of procedures performed.[16]

Summary

More than half of all NYC adults are overweight or obese. Behavioral changes, including healthier eating and regular physical activity, are the cornerstone of any weight loss program. Primary care physicians can help patients adopt gradual lifestyle changes to lose weight, maintain weight loss, and reduce obesity-related illness and death. ◆

Table 6. Long-Term Weight Loss Drugs Currently Approved by FDA*[3,7,24]

Drug	Dose (oral)†	Average weight loss (drugs & lifestyle change combined)	Action	Serious Adverse Effects[23,24]	Contraindications[23,24]	Cost/month (range)[25,26]
Sibutramine *Meridia*	10 mg initially; may be increased to 15 mg or decreased to 5mg.	9.5 lbs over 2 years	Norepinephrine, dopamine, and serotonin reuptake inhibitor.	Increase in heart rate and blood pressure, potential for abuse/dependence.	Hypertension, CHD, CHF, arrhythmias, history of stroke, use of MAOIs, eating disorders, severe renal impairment, hepatic dysfunction, pregnancy, and breastfeeding.†	$105-138
Orlistat‡ *Xenical*	120 mg tid before meals	6.2–9.9 lbs over 1–2 years	Inhibits pancreatic lipases, decreases fat absorption.	Decrease in absorption of fat-soluble vitamins, cramping, intestinal discomfort, soft stool and anal leakage, and need to take a multivitamin.[33]	Chronic malabsorption syndrome, cholestasis, pregnancy, and breastfeeding. Because of possible drug interactions, patients on cyclosporine should take orlistat at least two hours before or after taking cyclosporine.†	$225-289

*Other drugs have been used for weight loss, but they are not approved by the FDA for that indication per se (i.e., off-label use).

†There are many precautions not listed here. Consult product information for complete descriptions about dose, action, adverse effects, and contraindications.

‡60 mg capsule approved by FDA in February 2007 for over-the-counter sales.

Clinician Resources

National Heart, Lung, and Blood Institute
Obesity Education Initiative: www.nhlbi.nih.gov/about/oei/index.htm
Assessment and management of overweight and obese patients (online course): obesityeme.nhlbi.nih.gov
BMI calculator: www.nhlbisupport.com/bmi

Centers for Disease Control and Prevention
Physical activity resources for health professionals: www.cdc.gov/nccdphp/dnpa/physical/health_professionals/index.htm
Nutrition resources for health professionals: www.cdc.gov/nccdphp/dnpa/nutrition/health_professionals/index.htm

The Surgeon General's Call to Action to Prevent and Decrease Overweight and Obesity
www.surgeongeneral.gov/topics/obesity

National Guideline Clearinghouse
Dietary Guidelines for Americans, 2005
www.guideline.gov/summary/summary.aspx?doc_id=6417

North American Association for the Study of Obesity
Obesity, bias and stigmatization: www.naaso.org/information/weight_bias.asp

American Society for Bariatric Surgery
Suggestion for the pre-surgical psychological assessment of bariatric surgical candidates: www.asbs.org/html/pdf/PsychPreSurgicalAssessment.pdf

NYS Department of Health
Strategic plan for overweight and obesity prevention: www.nyhealth.gov/prevention/obesity/strategic_plan.htm

Motivational Interviewing Techniques for Clinicians
www.motivationalinterview.org/clinical/whatismi.html
Dunn C, Rollnick S. *Lifestyle Change (Rapid Reference series)*. Chicago, IL: Mosby; 2003.

National Weight Control Registry
Research Findings: www.nwcr.ws/research

Patient Resources

Shape Up New York (free family fitness classes at city parks)
www.nyc.gov/html/doh/html/cdp/cdp_pan_programs_comm.shtml#shape

NYC DOHMH Fitness Resource Directories for Select Communities
East and Central Harlem: www.nyc.gov/html/doh/downloads/pdf/cdp/cdp-resource-harlem.pdf
North and Central Brooklyn: www.nyc.gov/html/doh/downloads/pdf/dpho/dpho-brooklyn-fitnessprog.pdf
South Bronx: www.nyc.gov/html/doh/downloads/pdf/cdp/cdp-resource-sobronx.pdf

NYC DOHMH Bureau of Chronic Disease Prevention and Control
www.nyc.gov/html/doh/html/cdp/cdp.shtml

NYC Department of Parks and Recreation
www.nycgovparks.org

Transportation Alternatives
Rides and Walks: www.transalt.org/info/ridesandwalks.html

President's Council on Physical Fitness and Sports
www.fitness.gov

Centers for Disease Control and Prevention
Overweight and obesity: www.cdc.gov/nccdphp/dnpa/obesity
Physical activity for everyone: www.cdc.gov/nccdphp/dnpa/physical/index.htm
Nutrition for everyone: www.cdc.gov/nccdphp/dnpa/nutrition/nutrition_for_everyone/index.htm

American Heart Association
800-242-8721 or www.americanheart.org
Physical activity calorie use chart: www.americanheart.org/presenter.jhtml?identifier=756

American Diabetes Association
800-342-2383 or www.diabetes.org

National Weight Control Registry
Success Stories: www.nwcr.ws/stories.htm

References Available Online: www.nyc.gov/html/doh/downloads/pdf/chi/chi26-4-ref.pdf

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City Health Information

April/May 2007 The New York City Department of Health and Mental Hygiene Vol. 26(4): 23-30

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CME Activity Preventing and Managing Overweight and Obesity in Adults

1. **DM is a 52-year old woman who has had diabetes for 6 years. She is 5'6", weighs 200 pounds, and has a BMI of 32kg/m². Her last A1C was 9.4%. Of the several medications she takes for her diabetes, all can cause weight gain EXCEPT:**
   A. Insulin
   B. Glipizide
   C. Pioglitazone
   D. Metformin

2. **DM eats at a fast-food restaurant 5 times a week, drinks 16 oz of juice for breakfast, and has no time to exercise. All of the following changes can help improve her weight and health EXCEPT:**
   A. Limiting fast food, deep-fried foods, and high-fat snacks.
   B. Drinking water, seltzer, or 1% or skim milk instead of non-diet soda, fruit drinks and juices, and high-fat milk.
   C. Getting off the bus or subway a stop or two early and walking.
   D. Cooking with partially hydrogenated oils instead of canola or olive oil.

3. **AB is a 38-year-old man with diabetes, heart disease, and sleep apnea. He has a BMI of 42kg/m². All of the following are appropriate for the management of his obesity EXCEPT:**
   A. Developing a weight loss plan emphasizing healthy eating and physical activity.
   B. Immediately starting medications such as orlistat or sibutramine because his obesity is so severe.
   C. Setting a weight loss goal of 10% of total body weight over 6 months.
   D. Discussing bariatric surgery if, after a year of diet and exercise with intensive counseling, he is unable to meet his weight loss goals.

4. **DM is having trouble sticking to an exercise plan. Her doctor should support this lifestyle change by all of the following EXCEPT:**
   A. Helping her identify and set small, achievable goals for physical activity.
   B. Recommending a walking buddy or group.
   C. Discussing potential barriers to exercising and working with her to address those barriers.
   D. Telling her the best thing for her to do is join a gym and get vigorous exercise such as aerobics.

5. **It is important to discuss AB's weight status with sensitivity and attention to potential stigma. His primary care physician should do all of the following EXCEPT:**
   A. Weigh AB in a private setting without judgment or comment.
   B. Use a large cuff, a large gown, and a scale that accommodates more than 300 pounds.
   C. Tell AB that his fatness is unacceptable and instruct him on setting behavioral goals.
   D. Use empathic, interactive communication to help AB identify and set manageable goals for diet and physical activity.

6. **How well did this continuing education activity achieve its educational objectives?**
   ☐ A. Very well ☐ B. Adequately ☐ C. Poorly

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Continuing Education Activity

This issue of *City Health Information*, including the continuing education activity, can be downloaded from the publications section at nyc.gov/health. To access *City Health Information* and Continuing Medical Education online, visit www.nyc.gov/html/doh/html/chi/chi.shtml.

Instructions

Read this issue of *City Health Information* for the correct answers to questions. To receive continuing education credit, you must answer 4 of the first 5 questions correctly.

To Submit by Mail

1. Complete all information on the response card, including your name, degree, mailing address, telephone number, and e-mail address. PLEASE PRINT LEGIBLY.

2. Select your answers to the questions and check the corresponding boxes on the response card.

3. Return the response card (or a photocopy) postmarked **no later than May 31, 2008.** Mail to:

CME Administrator, NYC Dept. of Health and Mental Hygiene,
2 Lafayette, CN-65, New York, NY 10277-1632.

To Submit Online

Visit www.nyc.gov/html/doh/html/chi/chi.shtml to submit a continuing education test online. Once logged into NYC MED, use the navigation menu in the left column to access this issue of *City Health Information*. Your responses will be graded immediately, and you can print out your certificate.

Continuing Education Activity

Preventing and Managing Overweight and Obesity in Adults

SPONSORED BY
THE NEW YORK CITY DEPARTMENT OF HEALTH AND MENTAL HYGIENE (DOHMH)
CITY HEALTH INFORMATION
APRIL/MAY 2007 VOL. 26(4):23-30

Objectives

At the conclusion of the activity, the participants should be able to:

1. Identify and manage patients who are overweight or obese.
2. Counsel patients on lifestyle modification.

Accreditation

The DOHMH is accredited by the Medical Society of the State of New York to sponsor continuing medical education for physicians. The DOHMH designates this educational activity for a maximum of 1 *AMA PRA Category 1 Credits*™. Each physician should claim only those hours of credit that were spent on the educational activity.

Participants are required to submit name, address, and professional degree. This information will be maintained in the Department's CME program database. If you request, the CME Program will verify your participation and whether you passed the exam.

We will *not* share information with other organizations without your permission, except in certain emergencies when communication with health care providers is deemed by the public health agencies to be essential or when required by law. Participants who provide e-mail addresses may receive electronic announcements from the Department about future CME activities as well as other public health information.

Participants must submit the accompanying exam by May 31, 2008.

CME Activity Faculty:
Diana K. Berger, MD, MSc; Karen K. Lee, MD, MHSc; Lynn D. Silver, MD, MPH

All faculty are affiliated with the New York City DOHMH, Division of Health Promotion and Disease Prevention.

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PREVENTING AND MANAGING OVERWEIGHT AND OBESITY IN ADULTS

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How Many Calories Do People Need Each Day?

Most adults need about 2,000 calories a day.

The exact number depends on a person's sex, age, and physical activity level, as shown in the table.

Eating or drinking more calories than the body uses causes weight gain – which can lead to obesity, diabetes, and heart disease.

Most people underestimate the calories they consume, especially for less-healthy items. As a result, it is easy to take in too many calories without realizing it. For example, some large sodas have as many as 600 calories. Some main dishes may contain 1600 calories – about three quarters of the calories most adults should eat in a whole day. Just 100 extra calories a day leads to 10 pounds of extra weight in a year.

To learn more about smart food choices, enter your age, sex and activity level in the My Pyramid Plan at www.mypyramid.gov.

Recommended Daily Calorie Intake

	Males		Females	
	Activity level*		Activity level*	
Age	Sedentary	Moderate	Sedentary	Moderate
2	1000	1000	1000	1000
3	1000	1400	1000	1200
4-5	1200	1400	1200	1400
6	1400	1600	1200	1400
7	1400	1600	1200	1600
8	1400	1600	1400	1600
9	1600	1800	1400	1600
10	1600	1800	1400	1800
11	1800	2000	1600	1800
12	1800	2200	1600	2000
13	2000	2200	1600	2000
14	2000	2400	1800	2000
15	2200	2600	1800	2000
16-18	2400	2800	1800	2000
19-20	2600	2800	2000	2200
21-25	2400	2800	2000	2200
26-40	2400	2600	1800	2000
41-45	2200	2600	1800	2000
46-50	2200	2400	1800	2000
51-60	2200	2400	1600	1800
61-65	2000	2400	1600	1800
66 and up	2000	2200	1600	1800

* *Sedentary* means less than 30 minutes of moderate physical activity per day; most New Yorkers are sedentary. *Moderate* means 30 to 60 minutes a day of moderate physical activity. People who get 60 or more minutes a day of moderate physical activity should consume more calories (see www.mypyramid.gov).

Table adapted from MyPyramid Food Intake Pattern Calorie Levels, USDA, April 2005.

09.06

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